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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,051	07/30/2007	**Matthieu Helft**	1022702-000151	6187

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EXAMINER	
LISTVOYB, GREGORY	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
03/26/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No.	Applicant(s)	
	10/562,051	HELFT ET AL.	
	Examiner	Art Unit	
	GREGORY LISTVOYB	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-40 and 43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-40 and 43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/3/2009 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19-21, 23-25, 27-40, 42 rejected under 35 U.S.C. 102(b) as being anticipated by Bentley et al (US 4102846) herein Bentley.

Bentley discloses a process for preparing spherical polyamide particles having a mean diameter of less than 1 mm (Abstract, 1 um, see Example 1), comprising the following steps:

a) preparing a dispersion of a first liquid which comprises polyamide monomers, such as lactam (see Example 1), Nylon 6,6 salt (the same as one in the Application examined, both monomeric systems meet limitations of claim 23), in a high boiling hydrocarbon at atmospheric or excessive pressure (the boiling point exceeds 150C, meeting the limitations of Claims 24-25 and 27 see Examples);

b) polymerizing the monomers by polycondensation by heating the reaction medium and maintaining the heating at a temperature below the melting point of the polyamide with the desired degree of polymerization (see Examples) for 35 min, while distilling out forming water in azeotrope (see Examples) at atmospheric pressure (meeting the limitations of claim 27).

e) recovering the spherical polyamide particles therefrom (see Column 11, line 45).

Note that limitations c) and d) of claim 19 are optional.

Bentley teaches that the monomers can be represented by solid or liquid, forming dispersion or emulsion in the inert solvent (see Column 6, line 65). In the case

of emulsion the new limitations of clam1, claiming two essentially immiscible phases, liquid represented by monomer itself.

Regarding claims 28 -30, Bentley teaches temperature of step b) above 150C, i.e. 170-183C (see Example 1), where azeotrope of the solvent and unreacted monomers are removed over period of 35 min (see Example 1).

In reference to claim 42, Bentley's system does not contain any emulsifying agent (see Example 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19-21, 23-25, 27-40 rejected under 35 U.S.C. 103(a) as being unpatentable over Ohara et al (US 6127513) herein Ohara.

Ohara discloses a process containing the steps (a) and (b) of claim 1 (see Example 1). In addition, Ohara's process includes washing and drying procedure (see Example 1).

Ohara teaches the second solvent (xylene), which added after the polymerization (see Example 1). However, Ohara does not teach that the second solvent is added before the polymerisation starts.

The position is taken that the above solvent can be added before the polymerization in Ohara's process, since it assists in better dispersion of polyamide monomers, which facilitates the polymerization rate.

Therefore, it would have been obvious that xylene can be added before the polymerization , since it assists in better dispersion of polyamide monomers, which facilitates the polymerization rate.

Claim 22, 26, 32-34 rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley in view of Okazaki et al (US 3446782) herein Okazaki.

Bentley disclose a process for preparing spherical polyamide particles having a mean diameter of less than 1 mm :

a) preparing a dispersion of a first liquid which comprises polyamide monomers, such as caprolactam, adipic acid and hexamethylenediamine in a second inert liquid

b) polymerizing the monomers by polycondensation by heating the reaction medium and maintaining the heating at a temperature below the melting point of the polyamide with the desired degree of polymerization.

e) recovering the spherical polyamide particles therefrom.

Bentley does not disclose the first liquid comprising a solution of monomers in water.

Okazaki discloses a process of manufacture of powdery synthetic linear polyamides, where dispersion media for monomers is water (see Example 1).Okazaki teaches that use of aqueous solution minimize a polymer degradation, decreases a cost of solvents (Column 4, line 20).

Therefore, it would have been obvious to a person of ordinary skills in the art to use water in Bentley's process, since it creates an azeotrope, which facilitates solvent removal.

Regarding claims 32-34, Okazaki discloses washing and drying process for his polyamide particles (see Example 6).

Claims 19- 22, 25- 27, 31, 35-40, 43 rejected under 35 U.S.C. 103(a) as being unpatentable over Montasser (WO01/68235, cited with equivalent US 2003/0059473) herein Montasser.

Montasser discloses a process for preparing spherical polyamide particles having a mean diameter of less than 1 um, comprising the following steps:

a) preparing a dispersion of a 10-90% of the first liquid (organic, see lines 0023 and 0041, Example 1) which comprises polyamide monomer, in a second inert liquid (aqueous, See line 0042);

b) polymerizing the monomers by polycondensation and/or polyaddition by heating the reaction medium and maintaining the heating at a temperature below the melting point of the polyamide with the desired degree of polymerization (see Abstract).

Regarding claim 43, Montasser teaches water and oil, which are immiscible solvents and form continuous and dispersed phases.

Montasser discloses that solvents can be removed by distillation

Montasser does not teach that both polyamide monomers dispersed in the first liquid. Instead he teaches that the second monomer is dispersed in the second liquid (see Abstract). He teaches that his process takes place at 5 fold excess of the second monomer (see line 0011), which is clearly constitutes a disadvantage of the above process. In addition, this process is applicable only for diamines soluble in water.

It would have been obvious to a person of ordinary skills in the art to place both monomers into organic phase in order to decrease excess of a diamine and increase applicability of the process.

Response to Arguments

Applicant's arguments filed 1/27/2009 have been fully considered but they are not persuasive.

Applicant argues that since the dispersing agent is soluble in the inert organic liquid (as mentioned in col. 1, lines 67- 68 of Bentley et al), any first and second liquid, as defined in claim 19, cannot be considered as immiscible according to the teachings of Bentley et al.

Examiner disagrees. Monomers in Bentley's disclosure can exist in both solid and liquid form, forming emulsion or dispersion . The only condition regarding the first liquid is that it should comprise a monomer. Therefore, first liquid can be represented by the liquid monomer itself.

The same rationale is applicable to rejection under 35 USC 103(a) based on Bentley, Okazaki and Ohara.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY LISTVOYB whose telephone number is (571)272-6105. The examiner can normally be reached on 10am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James J. Seidleck/
Supervisory Patent Examiner, Art Unit 1796
GL